

CLAIMS**WE CLAIM:**

1. A lancet device comprising:

a magnetic element;

5 a member capable of being affected by magnetic forces emanating from the magnetic element; and,

a lancet movable between a withdrawn position and a piercing position and adapted to be movable from the withdrawn position to the piercing position by the movement of one of either the magnetic element or the member relative to the other of either the magnetic element
10 or the member.

2. The lancet device of Claim 1 further including:

an arming element adapted to move one of either the member or the magnetic element to an armed position wherein the magnetic forces from the magnetic element affect the member.
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3. The lancet device of Claim 1 wherein the magnetic forces from the magnetic element affect the member by either attracting and pulling the member towards the magnetic element or repulsing and pushing the member away from the magnetic element.

20 4. The lancet device of Claim 1 further including:

a lever member adapted to hold the one of either the member or the magnetic element in the armed position, the lancet being in a withdrawn position.

5. The lancet device of Claim 1 further including:

25 an activator adapted to release the one of either the member or the magnetic element from the armed position permitting movement between the member and magnetic element by at least, in part, the magnetic forces, resulting in the movement of the lancet from a withdrawn position to the piercing position.

30 6. A lancet device comprising:

a magnetic element;

a member capable of being affected by magnetic forces emanating from the magnet;

a lancet movable between a withdrawn position and a piercing position and adapted to be movable from the withdrawn position to the piercing position by the movement of one of either the magnetic element or the member relative to the other of either the magnetic element or the member;

5 a mechanical or electrical force adapted to move one of either the member or the magnetic element to an armed position wherein the magnetic forces from the magnetic element affect the member;

a lever member adapted to hold the one of either the member or the magnetic element in the armed position, the lancet being in a withdrawn position; and,

10 an activator adapted to release the one of either the member or the magnetic element from the armed position permitting movement between the member and the magnetic element by at least, in part, the magnetic forces, resulting in the movement of the lancet from a withdrawn position to the piercing position.

15 7. The lancet device of Claim 6 wherein the magnetic forces from the magnetic element affect the member by either attracting and pulling the member towards the magnetic element or repulsing and pushing the member away from the magnetic element.

20 8. The lancet device of Claim 6 further including a housing for either encasing or supporting the magnetic element, the member, the lancet, the moving means, the holding means and the activator means.

9. The lancet device of Claim 6 wherein the lancet is within the housing in the withdrawn position and a portion thereof is projecting outwardly from the housing in the piercing position.

25 10. The lancet device of Claim 6 further comprising:
an adjuster adapted to selectively control the positioning of the piercing position relative to the housing.

30 11. The lancet device of Claim 6 wherein the housing comprises a central housing and a removable cap.

12. The lancet device of Claim 11 wherein the removable cap permits removal and replacement of the lancet.

13. The lancet device of Claim 6 wherein the magnetic element is a substantially cylindrical magnet having a magnet diameter and the member is a substantially tubular collar having an inner diameter greater than the magnet diameter so as to permit the magnet to pass therethrough.

14. The lancet device of Claim 6 wherein the lancet is in communication with the collar such that movement of the collar results in corresponding movement of the lancet.

15. The lancet device of Claim 6 wherein:

the magnetic element and the collar are configured within the housing such that in the armed position, the magnetic forces of the magnetic element attract the collar to the magnetic element and

when the activator releases the collar, the collar travels towards the magnetic element and past the magnetic element by the momentum of the traveling collar resulting in the lancet traveling to the piercing position.

16. The lancet device of Claim 6 further including a steady state position between the withdrawn position and the piercing position wherein the magnetic forces of the magnetic element hold the collar concentric therewith in equilibrium and the lancet is within the housing.

17. The lancet device of Claim 6 wherein

the magnetic element and the collar are configured within the housing such that in the armed position, the magnetic forces of the magnetic element attract the collar to the magnetic element and

when the activator releases the collar, the collar travels towards the magnet, through the steady state position concentric with the magnet, past the magnetic element due to the momentum of the traveling collar and back to the steady state position resulting in the lancet traveling to the piercing position and back to a position within the housing.

18. The lancet device of Claim 6 wherein the magnetic element is fixed within an inner shaft and the collar is fixed around an outer shaft, the outer shaft moving relative to the inner shaft.

19. The lancet device of Claim 18 wherein the outer shaft is adapted to permit a lancet to be selectively connected to or removed from the outer shaft.

20. The lancet device of Claim 6 further including an end cap adapted to be selectively connect to or removed from the housing, the lancet projecting outwardly from the end cap in the piercing position.

21. The lancet device of Claim 6 wherein the activator is a switch for selectively engaging the collar, the collar being held when the collar is in the armed position and the lancet being in the withdrawn position when the switch engages the collar, the lancet being free to move from the armed and withdrawn positions when the switch is disengaged.

22. The lancet device of Claim 6 wherein the activator is a switch for selectively engaging a circumferential channel in the collar, the collar being held when the collar is in the armed position and the lancet being in the withdrawn position when the switch engages the circumferential channel, the collar and lancet being free to move from the armed and withdrawn positions when the switch disengages from the circumferential channel.

23. The lancet device of Claim 6 further including an arming member for mechanically moving the collar from a steady state position to the armed position.

24. The lancet device of Claim 23 further including an internal spring holding the arming member to the housing.

25. The lancet device of Claim 6 further including a dial adjuster and a follower for selectively controlling the positioning of the piercing position, the adjuster rotating relative to the follower to change the relative longitudinal position of the lancet relative to an end of the cap.

26. A lancet device comprising:

a magnetic element;

a member capable of being affected by magnetic forces emanating from the magnetic element by either attracting and pulling the member towards the magnetic element or repulsing and pushing the member away from the magnetic element; and,

a lancet movable between a withdrawn position and a piercing position and adapted to be movable by the movement of one of either the magnetic element or the member relative to the other of either the magnetic element or the member.

27. The lancet device of Claim 26 wherein one of the magnetic element and the member is free to pass through the other of the magnetic element and the member.

28. The lancet device of Claim 27 wherein the one of the magnetic element and the member is cylindrical with an outer diameter and the other of the magnetic element and the member is tubular having an inner diameter, the outer diameter being less than the inner diameter.

29. The lancet device of Claim 25 wherein the lancet is adapted to be movable from the withdrawn position to the piercing position by the movement of one of either the magnetic element or the member relative to the other of either the magnetic element or the member.

30. The lancet device of Claim 26 wherein the lancet is adapted to be movable from the withdrawn position to the piercing position and then back to a steady state equilibrium position by the movement of one of either the magnetic element or the member relative to the other of either the magnetic element or the member.

31. The lancet device of Claim 26 further including:

means for moving one of either the member or the magnetic element to an armed position wherein the magnetic forces from the magnetic element affect the member;

means for holding the one of either the member or the magnetic element in the armed position, the lancet being in a withdrawn position; and,

activator means for releasing the one of either the member or the magnetic element from the armed position permitting movement between the member and magnetic element by at least,

in part, the magnetic forces, resulting in the movement of the lancet from a withdrawn position to the piercing position.

32. The lancet device of Claim 31 wherein:
the moving means is an arming member; and
the holding means and activator means is a switch.

33. A magnetic lancet device comprising:
a magnetic element affecting a member 360 degrees by either attracting and pulling the
member towards the magnetic element or repulsing and pushing the member away from the
magnetic element, a lancet adapted to be movable by the movement of one of either the
magnetic element or the member relative to the other of either the magnetic element or the
member.

34. The lancet device of Claim 33 wherein one of the magnetic element and the member is
free to pass through the other of the magnetic element and the member.